

# BEST AVAILABLE COPY

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property Organization  
International Bureau



(43) International Publication Date  
27 December 2001 (27.12.2001)

PCT

(10) International Publication Number  
**WO 01/99027 A2**

(51) International Patent Classification<sup>7</sup>: **G06F 19/00**

CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZW.

(21) International Application Number: **PCT/US01/19542**

(22) International Filing Date: 19 June 2001 (19.06.2001)

(25) Filing Language: English

(84) Designated States (regional): ARIPO patent (GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG).

(26) Publication Language: English

(30) Priority Data:

09/596,983 20 June 2000 (20.06.2000) US

(71) Applicant and

(72) Inventor: **FREEMAN, Mark, B. [US/US]**; 9976 S. Military Trail, Unit D-2, Boynton Beach, FL 33436 (US).

(74) Agent: **FISCHER, Ury**; Lott & Friedland, P.A., P.O. Drawer 141098, Coral Gables, FL 33114-1098 (US).

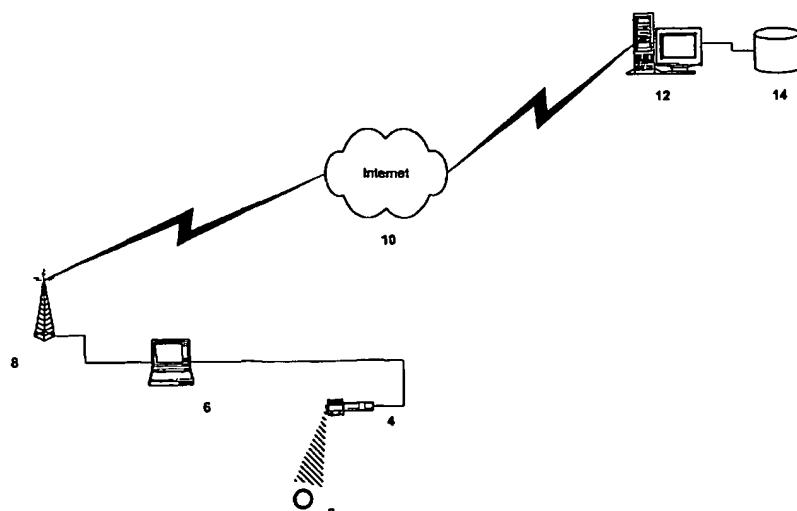
(81) Designated States (national): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU,

**Published:**

— without international search report and to be republished upon receipt of that report

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: INFORMATION DELIVERY SYSTEM FOR APPLICATION WHEN TIME IS OF THE ESSENCE



**WO 01/99027 A2**

(57) Abstract: A system for providing information in emergency situations. More specifically, the present invention relates to a system primarily designed to alert emergency medical personnel of legal documents that pertain to rendering aid in situations where time is of the essence, for example, living wills and do not resuscitate orders. The system can employ two methods for establishing a patient's identification, transponder scan (2) or retina/iris scan (24). Once the patient identification is determined, information is transmitted from an information database (14) to a local device (6) employed by emergency medical personnel. Based on the information contained in the files of the patient, the emergency medical personnel make a decision on whether to continue rendering resuscitation or artificial sustenance of the patient. In a scenario where the signal from the local device (6) is rendered weak, for any number of reasons, a repeater transmitter (8) can be located in the emergency vehicle, or at some nearby location.

5

10

1

15

INFORMATION DELIVERY SYSTEM FOR  
APPLICATION WHEN TIME IS OF THE ESSENCE

**TECHNICAL FIELD**

The present invention relates generally to systems for providing information in emergency situations. More specifically, the present invention relates to a system primarily designed to alert emergency medical personnel of legal documents that pertain to rendering aid in situations where time is of the essence, for example, living wills and do not resuscitate orders.

**25 BACKGROUND ART**

Technological advances in the field of medicine have enabled medical personnel to achieve clinical results that would have been impossible in the past. Such innovation has made it not only possible to artificially sustain life, but also to return to life someone who has suffered from cardiopulmonary arrest.

At first blush, this technology seems remarkable, and its benefits intuitive. However, the objectives of sustaining and restoring life do not

necessarily mesh with the objectives of certain people who do not wish to avail themselves of this technology. It is estimated that every year two million people die in America, 80 percent in hospitals, hospices or nursing homes. Of those two million people, chronic illness, such as cancer or heart disease,  
5 accounts for two of every three deaths. It is estimated that approximately 70 percent of these people die after a decision is made to forego life-sustaining treatment. *The National Center for Health Statistics (NCHS), Centers for Disease Control and Prevention, National Mortality Followback Survey, 1998.*

10 There are a number of reasons why a person would not want to be resuscitated or artificially sustained. For example, many elderly fear a technological death and are turning to natural death. Another common motivation with the elderly is that the person may not necessarily want to live any longer, satisfied with the length and quality of the life he or she has lived.  
15 Sometimes a person may not want to be revived or sustained because he or she believes that survival or living with whatever permanent damage has been sustained is a fate worse than death. In addition, there are certain religions, or sects of religions, that deny technological preservation of life, and followers of these religions prefer not to be resuscitated or artificially sustained.

20 Mechanisms have been developed to effectuate patients' self-determination rights as a result of certain people's preferences to not be resuscitated or artificially sustained. Living wills, medical powers of attorney and Do Not Resuscitate Orders ("DNRs") are the most common of these mechanisms. DNRs state that in the event of cardiopulmonary arrest the use of  
25 emergency medical services, including a respirator, is to be withheld. Living wills are used when a patient is terminally ill to prohibit the utilization of artificial life sustaining means and medical powers of attorney authorize specific people to make health care decisions for a patient who is not capable of making the decisions for themselves. All fifty states and the District of Columbia have laws authorizing the use of some type of advance directive (e.g., living wills, DNRs, medical powers of attorney). However, the laws that govern living wills, DNRs and medical powers of attorney for health care vary  
30 from state to state.

According to a 1991 Gallup poll, 75 percent of all Americans approve of living wills. This same poll also indicated that more than 20 percent of all Americans presently have a living will or medical power of attorney.

As society increasingly embraces a patient's right of self-determination, the use of advanced directives is becoming more common. Such directives can be difficult to implement when information regarding the advanced directives is not timely presented to care providers. A decision on whether to take life saving or sustaining measures must be made by emergency medical personnel in a split second in the field or in the emergency room ("ER"). Unless the emergency medical personnel have instructions otherwise, the default will be to take life saving or sustaining measures. In order to prevent such measures, in the case of a patient who has a DNR for example, the aid-rendering personnel need to be advised simultaneously while life preserving treatment has commenced.

The end result of effectively using advanced directives is the patient's eventual death. There are certain arrangements that need to be made upon any person's death. Such arrangements include preparing for a funeral, perhaps collecting life insurance for the beneficiaries, notifying the next of kin, and other tasks. Currently, there is no way to automate these tasks to relieve the burden already imposed by a loved one's death.

Previous attempts have been made to provide a system designed to alert medical personnel regarding information associated with a specific patient, such as described in U.S. Patent No. 5,243,466 to *Perry et al.* ('466 patent); and U.S. Patent No. 5,924,074 to *Evans* ('074 patent); both of which are incorporated herein by reference.

The '466 patent describes a central depository for secure storage and rapid retrieval of important documents and information, such as living wills, durable powers of attorney, testamentary wills, authorization for organ donation, authorization for bone marrow donation, and insurance information. The '466 patent is illustrated in FIGS. 1, 2, 4, 5 and 6, comprising: a data storage means 40 for storing documents and other information, a means 20 for entering the documents into the data storage, a means for entering customer

information into the data storage FIG. 2, a means for verifying that the documents comply with the legal requirements of the jurisdiction 232, a means for updating 402 the information stored on the data storage means, means for processing requests for the documents 600-618, and a means for retrieving 622 specific documents pursuant to the requests.

The '074 patent describes a medical records system that creates and maintains all patient data electronically. The '074 patent is illustrated in FIG. 4, comprising: a point of care system 100 to capture patient data, a clinical data capture 142 in communication with the patient data capture 140, an encounter data capture 146 in communication with the patient data capture 140, to enter diagnoses and procedures administered, progress notes 144 in data communication with the patient 140, clinical 142 and encounter 146 data captures, and a patient data repository 102, in communication with the point of care system and external systems to store and organize the patient data for access by the point of care system.

While these prior attempts address and improve upon the various disadvantages discussed above, they, alone and in combination, leave significant shortfalls in the resolution of the problems. For example, the '466 patent describes a system for storing and administering a database of important documents and information related to specific medical patients and the medical field generally. In emergency situations, requests for information pertaining to advanced directives must be obtained on an expedited basis in order to be effective. However, the '466 patent only describes communications methods that would be impractical in an emergency situation. By way of example, the '466 patent contemplates information requests via traditional mail, complicated telephone procedures, facsimile, or over a modem for electronic mail.

As discussed above, the '074 patent to *Evans* also describes a system for creating and maintaining electronic patient data. This system, however, is not designed for emergency use. It is for use by health care providers in permanent medical facilities that would use a point of care information-input device to enter clinical information to the central database regarding the client.

The '074 patent also allows for simultaneous input from laboratories and other authorized medical facilities. This information is valuable for the ongoing care of a patient in a hospital, but emergency medical personnel will not be able to use this system to make the life or death decisions associated with advanced 5 directives such as DNRs, living wills and medical powers of attorney.

Consequently, there is a need in the art for a system capable of retrieving and providing information on an expedited basis.

There is a further need in the art for a system capable of retrieving and providing patient information, on an expedited basis, to emergency medical 10 personnel in the field or in the ER.

There is a further need in the art for a method for retrieving and providing information on an expedited basis.

There is a further need in the art for a method for retrieving and providing patient information, on an expedited basis, to emergency medical 15 personnel in the field or in the ER.

There is a further need in the art for a system capable of retrieving and providing information on an expedited basis, using iris-scanning technology.

There is a further need in the art for a system, using iris-scanning technology, capable of retrieving and providing patient information, on an 20 expedited basis, to emergency medical personnel in the field or in the ER.

### DISCLOSURE OF INVENTION

The present invention solves significant problems in the art by 25 providing a computer-implemented system for transmitting information when time is of the essence. In a preferred embodiment this system comprises a chip having embedded thereon a unique identifier; a scanning device for reading the identifier from the chip; and a local device, connected to the scanning device, for receiving the identifier from the scanning device, and for 30 transmitting the identifier to a central server via a global communications

network, wherein the central server transmits the identifier to an information database, and in response thereto, receives the information from the information database and transmits the information.

In an alternate embodiment of the invention the computer-implemented system conveys information to emergency medical personnel when time is of the essence and comprises a transponder chip having a unique patient identifier embedded thereon; a scanning device for reading the patient identifier from the chip; a local device, connected to the scanning device, for receiving the patient identifier from the scanning device and for transmitting the identifier via a global communications network; and a central server operatively connected to the global communications network for receiving the patient identifier from the local device, wherein the central server transmits the patient identifier to an information database and, in response thereto, receives the information from the information database and transmits the information.

In a further alternate embodiment of the invention, what is provided is a computer-implemented method that conveys information when time is of the essence, comprising the steps of embedding a unique identifier on a transponder chip; reading the identifier from the chip using a scanning device; and receiving the identifier from the scanning device on a local device, connected to the scanning device, and transmitting the identifier to a central server via a global communications network, wherein the central server transmits the identifier to an information database, and in response thereto, receives the information from the information database and transmits the information.

In another alternate embodiment of the invention, a computer-implemented method conveys information to emergency medical personnel when time is of the essence, and comprises the steps of collecting patient information; entering the patient information into an information database; embedding a unique identifier on a transponder chip; reading the identifier from the chip using a scanning device; and receiving the identifier from the scanning device on a local device, connected to the scanning device, and transmitting the identifier to a central server via a global communications

network, wherein a central server transmits the patient identifier to an information database and, in response thereto, receives the information from the information database and transmits the information.

In a still further alternate embodiment of the invention, a computer-implemented system transmits information when time is of the essence and comprises a scanning device for reading unique eye characteristics; and a local device, connected to the scanning device, for receiving the unique eye characteristics from the scanning device, and for transmitting the unique eye characteristics to a central server, wherein the central server transmits the unique eye characteristics to an information database containing information matched to the unique eye characteristics and in response thereto, retrieves the information from the database and transmits the information.

In a yet further alternate embodiment of the invention, a computer-implemented system conveys information to emergency medical personnel when time is of the essence and comprises an information database for storing unique patient eye characteristics associated with a patient identifier and patient information; a scanning device for recording of the unique patient eye characteristics; a local device connected to the scanning device for receiving the unique patient eye characteristics from the scanning device and for transmitting the unique patient eye characteristics through a global communications network; and a central server operatively connected to the global communications network for receiving the unique patient eye characteristics from the local device, retrieving the patient information associated with the unique patient eye characteristics from the database, and transmitting the information.

Accordingly, it is an object of the present invention to provide a system capable of retrieving and providing information on an expedited basis.

It is a further object of the present invention to provide a system capable of retrieving and providing patient information, on an expedited basis, to emergency medical personnel in the field or in the ER.

It is a further object of the present invention to provide a method for retrieving and providing information on an expedited basis.

It is a further object of the present invention to provide a method for retrieving and providing patient information, on an expedited basis, to emergency medical personnel in the field or in the ER.

5 It is a further object of the present invention to provide a system capable of retrieving and providing information on an expedited basis, using iris-scanning technology.

10 It is a further object of the present invention to provide a system, using iris-scanning technology, capable of retrieving and providing patient information, on an expedited basis, to emergency medical personnel in the field or in the ER.

These and other objects, features, and advantages of the present invention will become apparent upon reading the following specification when taken in conjunction with the accompanying drawings.

15 **BRIEF DESCRIPTION OF DRAWINGS**

FIG. 1 is a schematic view of a preferred embodiment of the overall system for retrieving documents, using a transponder chip, according to the invention.

20 FIG. 2 is a schematic view of an alternate embodiment of the overall system for retrieving documents, using a transponder chip and a signal repeater, according to the invention.

25 FIG. 3 is a schematic view of an alternate embodiment of the overall system for retrieving documents, using a retinal or iris scanner, according to the invention.

FIG. 4 is a schematic view of an alternate embodiment of the overall system for retrieving documents, using a retinal or iris scanner and a signal repeater, according to the invention.

30 FIG. 5 is a schematic view of an alternate embodiment of the overall system for retrieving documents, using a retinal or iris scanner, and providing status notification to pre-designated parties according to the invention.

**FIG. 6** is a flow chart illustrating the operation of the invention when used with a transponder chip.

**FIG. 7** is an illustration depicting the preliminary screen of the graphical user interface of the system.

5       **FIG. 8** is an illustration depicting the information screen of the graphical user interface of the system.

**FIG. 9** is an illustration depicting the information screen of the graphical user interface of the system providing a scanned image of a DNR.

10      **FIG. 10** is an illustration depicting the information screen of the graphical user interface of the system providing a scanned image of a living will.

**FIG. 11** is a flow chart illustrating the operation of the invention when used with a retinal or iris scanner.

15      **BEST MODE FOR CARRYING OUT THE INVENTION**

Referring initially to **FIG. 1** of the drawings, in which like numerals indicate like elements throughout the several views, in a preferred embodiment the overall system 1 for retrieving documents and information 60 is provided a transponder chip 2, worn on the person of the patient, in a ring for example. The chip 2, is detected and read by a hand-held scanning device 4 suited specifically for use with transponders. The hand-held scanning device is operatively connected to a local device 6 or a personal data assistant that provides a graphical user interface for facilitating usage of the system 1, and most importantly displaying the output information 60 on the patient. The local device 6 sends and receives information 60 from the information database 14 via a wireless PC card 8 that enables communication from the local device 6 without the use of a wired connection. The wireless card 8 transmits information to a global network of computers 10, also known as the Internet. A computer server 12 is operatively connected to the Internet 10 and the information database 14. The server 12 receives and processes information

and requests for information 60 utilizing the contents of the database 14. Once a patient's identification is verified based upon the data contained on the transponder chip 2, information 60 is returned to the local device 6 to be used to determine if the patient should be resuscitated or artificially sustained.

5 Referring to FIG. 2, the same system as illustrated in FIG. 1 is shown with the addition of a repeater transmitter 20. This system can be employed where the system 1 requires a signal boost or if the local device 6 and its transmitter 8 are in a position whereby its signal strength is reduced (e.g. in a building or tunnel) and therefore require an intermediate transmitter. In this  
10 embodiment of the invention, a second computer 18 receives 16 the data transmission from the local device 6 and retransmits the signal through a second "repeater" transmitter. The second computer 18 and repeater transmitter 20 would likely be located in an emergency vehicle (e.g. ambulance).

15 FIG. 3 illustrates an alternate embodiment of the overall system 1 for retrieving documents and information 60. Rather than being provided with a transponder chip 2 however, identity is established using the iris or retinal portion of the eye 22. The iris or retina of the eye 22, is detected and read by a hand-held iris or retinal scanning device 24. The hand-held scanning device 24  
20 is operatively connected to a local device 6 or a personal data assistant that provides a graphical user interface for facilitating usage of the system 1, and most importantly displaying the output information 60 on the patient. The local device 6 sends and receives information 60 from the information database 14 via a wireless PC card 8 that enables communication from the  
25 local device 6 without the use of a wired connection. The wireless card 8 transmits information to a global network of computers 10, also known as the Internet. A computer server 12 is operatively connected to the Internet 10 and the information database 14. The server 12 receives and processes information and requests for information 60 utilizing the contents of the database 14. Once  
30 a patient's identification is verified based upon the data from the retina or iris of the eye 22, and captured by the scanner 24, patient specific information 60 is returned to the local device 6 to be used to determine if the patient should be resuscitated or artificially sustained.

Similarly to what was illustrated in FIG. 2, an alternate embodiment of the present invention is pictured in FIG. 4 and includes the use of a repeater transmitter 20 with an iris or retinal scanner 24 (instead of a transponder 2).

FIG. 5 is the system 1 depicted generally with the addition of the patient status notification feature. This feature can be used with any of the embodiments disclosed herein. Upon a request for advanced directive information by emergency medical personnel, certain pre-designated recipients 26 can be notified that the patient has been the subject of emergency medical attention. In the event the patient has advanced directives on file, it is likely that the patient has died or will die in the near future. Therefore, pre-designated recipients of a status communication could include: a funeral home, an organ donor bank, next of kin, medical professionals other than the emergency medical personnel (e.g. family doctor), Medicare or other government health care organization, and at least one insurance company.

Illustrated in FIG. 6 is the general operation of the system 1 in flow chart form. An emergency medical team is called 30 through "911" or other means to assist a person in medical distress. The first question is whether the patient, upon arrival of the emergency medical personnel, is dead or dying 32. If not, then the system 1 is not required 34. If the patient is dead or dying, then the emergency medical personnel must activate the system 1. The next step is identifying 38 whether the patient is wearing a transponder 2, which could be implanted in a piece of jewelry like a ring, for example. If the patient is not carrying a transponder 2, then the patient must be treated according to the normal protocols followed by the emergency medical personnel. The system 1 could be configured alternatively to utilize a retinal or iris scanner 24 to detect unique eye characteristics of the patient, see FIG. 11. If the patient is wearing a transponder 2, then the emergency personnel scan 44 the transponder 2 with the hand-held scanner 4. The transponder 2 contains 46 a unique patient identification that is readable by the scanner 4. Once the identification has been scanned, either through a retinal or iris scanner 24 or through a transponder 2, the system software submits 48 that identification to the local device 6. The local device 6 uses 50 a wireless PC card that is directly connected to the Internet 10, to submit a request 52 to the server computer 12.

The server computer 12 processes 54 the request by querying the information database 14. The database 14 retrieves the relevant data and submits 56 the patient information 60 to the local device 6 through the server 12. The local device 6 receives the patient information 60 and displays 58 the transmitted information. The patient information 60 displayed on the local device 6 includes: general patient data; a visual identity of the patient; a DNR with the patient's signature; the same DNR with the patient's physician's signature; and a living will, if there is one, with the patient's signature.

FIG. 7 illustrates the information screen of the system 1 and indicates that the identification application is now ready for input from an identity scanner, either the transponder scanner 4 or the retinal/iris scanner 24.

FIG. 8 shows the information screen as information 60 begins to become available through the system 1. The DNR and living will are displayed once the transmission of the patient information 60 is completed.

FIG. 9 is an example of a scanned DNR document that would be visible on the information screen once the transmission of the patient information 60 is completed.

FIG. 10 is an example of a scanned living will document that would be visible on the information screen once the transmission of the patient information 60 is completed.

FIG. 11 demonstrates the system 1 configured for use with the retinal or iris scanner 24 instead of the transponder chip 2. An emergency medical team is called 70 through "911" or other means to assist a person in medical distress. The first question is whether the patient, upon arrival of the emergency medical personnel, is dead or dying 72. If not, then the system 1 is not required 74. If the patient is dead or dying, then the emergency medical personnel must activate the system 1. The scan contains 86 the patient's unique eye characteristics. Once the unique eye characteristics have been scanned through a retinal or iris scanner 24 the system software submits 88 the unique eye characteristics to the local device 6. The local device 6 uses 90 a wireless PC card that is directly connected to the Internet 10, to submit a request 92 to the server computer 12 for the patient's information 60. The

server computer 12 processes 94 the request by querying the information database 14. The database 14 retrieves the relevant data and submits 96 the patient information 60 to the local device 6 through the server 12. The local device 6 receives the patient information 60 and displays 98 the transmitted information. The patient information 60 displayed on the local device 6 includes: general patient data; a visual identity of the patient; a DNR with the patient's signature; the same DNR with the patient's physician's signature; and a living will, if there is one, with the patient's signature.

Referring back to FIGS. 1 and 2, it can be seen that the same embodiments depicted therein have alternate methods of use. A first alternate method of use could be military security and verification of identity on the battlefield. Military personnel could have a transponder chip implanted in a dog tag. The system and process for retrieving information on a specific soldier would be similar to the preferred embodiment. This method of use could also be achieved through utilization of the iris or retinal scanning method illustrated in FIGS. 3 and 4.

A second alternate method of use for the system would be for law enforcement officers to access information on an individual. Criminals on parole could be required to carry a card with a transponder chip embedded therein, which could then be scanned by police using a scanning device. As in FIGS. 1 and 2, information on the criminal would be returned to the law enforcement officer. In addition to the use with parolees, all criminals who are released from prison could be required to carry a transponder chip for quick access to their criminal record. This method of use could also be achieved through utilization of the iris or retinal scanning method illustrated in FIGS. 3 and 4, in place of the transponder chip and chip scanner.

A third alternate method of use would be in the corporate network security arena. The system could be used to verify the identity of an approved user of a corporate network. This would be vital for a user who is located outside the network and is trying to gain access from a remote location. An iris scan would enable authentication and verification of a user's security clearance and enable the remote user to navigate the corporate network. A

database would be provided containing information on the person and all the appurtenant security and access level information. The same system could be implemented to determine Internet and intranet access for people already operating within the corporate network.

5       A fourth alternate method of use is in the field of travel. The present invention can be implemented to provide "paperless" passports and visas. A traveler could carry a card embedded with a transponder chip, which would be read by a scanning device at the point of entry, typically immigration. A database would include all material relevant to satisfy the needs of an  
10      immigration officer. This method of use could also be achieved through utilization of the iris or retinal scanning method illustrated in FIGS. 3 and 4, in place of the transponder chip and chip scanner.

A fifth alternate method of use for this system is in the field of electronic commerce ("e-commerce"). A consumer could utilize an iris scanner at the point of purchase. The scan results in a unique identifier of the consumer. This unique identifier is transmitted to the vendor who receives the identifier, and transmits the identifier and the purchase details to the issuing bank of the consumer's credit card. The credit card would have previously been associated with the consumer's unique identifier. The bank would  
15      receive the unique identifier and the purchase details from the vendor and from the consumer. In this manner, the vendor cannot overcharge, or charge for goods not purchased due to the verification of the purchase by the consumer. Upon receipt of the consumer verification, the bank would remit payment to the vendor for the transaction amount and the consumer's credit  
20      card would be charged the corresponding amount.  
25

A sixth alternate method of use, also involves verification of identification in the financial services industry, in the more specific field of securities trading over a global communications network. This alternative method of use is particularly useful to prevent unauthorized access to trading  
30      accounts. As a means for establishing the identity of, and the assets of, a person who wants to trade stocks or other financial asset, a transponder chip could be used implanted with a customer identifier similar to the disclosure in

**FIGS. 1 and 2.** This method of use could also be achieved through utilization of the iris or retinal scanning method illustrated in **FIGS. 3 and 4**, in place of the transponder chip and chip scanner.

A seventh alternate method of use for the present invention is in the field of medical insurance fraud prevention. The aim of this alternate method of use would be to prevent medical service providers from charging Medicare and medical insurance companies for services not rendered. All patients receiving medical services would carry identification with a transponder chip and other relevant data, like picture identification and the Medicare Internet address. The medical service provider would scan the chip containing the patient identifier. The medical service provider would transmit the identifier, the Medigap insurer's Internet address and the pre-assigned provider number to the Medicare database. The Medicare database issues an authorization number, along with basic demographic information and picture identification for the patient, to the medical service provider and the Medigap insurer. Once the patient has received the medical services approved by an authorization number, the medical service provider submits bills to Medicare and the Medigap insurer. The medical service provider submits their provider number, the authorization number and the date of service along with the bill. Both Medicare and the Medigap insurer match the authorization number, the provider number, and the date of service to verify that the medical service provider should be paid. The above alternate use would operate to eliminate Medicare inefficiency based upon medical services billed but not rendered. For services that were necessary for the patient's care, but are up-coded to extract extra money from Medicare and the insurers, pattern recognition software could be used to isolate this type of medical insurance fraud.

Accordingly, it will be understood that the preferred embodiment of the present invention has been disclosed by way of example and that other modifications and alterations may occur to those skilled in the art without departing from the scope and spirit of the appended claims.

What is claimed is:

1. A computer-implemented system for transmitting information when time is of the essence, comprising:
  - a chip having embedded thereon a unique identifier;
  - a scanning device for reading said identifier from said chip;
- 5 a local device, connected to said scanning device, for receiving said identifier from said scanning device, and for transmitting said identifier to a central server via a global communications network, wherein said central server transmits said identifier to an information database, and in response thereto, receives said information from said information database and transmits said information.
- 10
2. The system of claim 1, wherein said central server transmits a first portion of said information said local device.
3. The system of claim 1, wherein said central server transmits a second portion of said information to at least one predetermined information recipient.
- 15
4. A computer-implemented system for conveying information to emergency medical personnel when time is of the essence, comprising:
  - a transponder chip having a unique patient identifier embedded thereon;
  - 20
  - a scanning device for reading said patient identifier from said chip;
  - a local device, connected to said scanning device, for receiving said patient identifier from said scanning device and for transmitting said identifier via a global communications network;
- 25
- a central server operatively connected to said global communications network for receiving said patient identifier from said local device, wherein said central server transmits said patient identifier to an information database and, in response thereto, receives said information from said information database and transmits said information.
- 30
3. The system of claim 4, wherein said central server transmits a first portion of said information said local device.

6. The system of Claim 4, wherein said information includes general patient data, a patient picture, a do not resuscitate order, living wills, and medical powers of attorney.

7. The system of Claim 4, wherein said central server transmits a  
5 second portion of said information to at least one predetermined information recipient.

8. The system of Claim 7, wherein said server transmits said information to said predetermined information recipients through the telephone.

10 9. The system of Claim 7, wherein said server transmits said information to said predetermined information recipients through facsimile.

10. The system of Claim 7, wherein said server transmits said information to said predetermined information recipients through electronic mail.

15

11. The system of Claim 7, wherein said server transmits said information to said predetermined information recipients through standard mail.

12. The system of Claim 7, wherein said predetermined information recipients include funeral homes, organ donor banks, next of kin, medical professionals, Medicare or other government health care organizations, and at least one insurance company.

13. A computer-implemented method for conveying information when time is of the essence, comprising the steps of:

25 embedding a unique identifier on a transponder chip;  
reading said identifier from said chip using a scanning device;  
receiving said identifier from said scanning device on a local device,  
connected to said scanning device, and transmitting said identifier  
to a central server via a global communications network, wherein  
30 said central server transmits said identifier to an information database, and in response thereto, receives said information from said information database and transmits said information.

14. The method of claim 13, wherein said central server transmits a first portion of said information said local device.

15. The system of claim 13, wherein said central server transmits a second portion of said information to at least one predetermined information  
5 recipient.

16. A computer-implemented method for conveying information to emergency medical personnel when time is of the essence, comprising the steps of:

collecting patient information;  
10 entering said patient information into an information database;  
embedding a unique identifier on a transponder chip;  
reading said identifier from said chip using a scanning device;  
receiving said identifier from said scanning device on a local device,  
connected to said scanning device, and transmitting said identifier  
15 to a central server via a global communications network, wherein a central server transmits said patient identifier to an information database and, in response thereto, receives said information from said information database and transmits said information.

17. The method of claim 16, wherein said central server transmits a  
20 first portion of said information said local device.

18. The method of Claim 16, wherein said information includes general patient data, a patient picture, a do not resuscitate order, living wills, and medical powers of attorney.

19. The method of Claim 16, wherein said central server transmits a  
25 second portion of said information to at least one predetermined information recipient.

20. The method of Claim 19, wherein said server transmits said information to said predetermined information recipients through the telephone.

30 21. The method of Claim 19, wherein said server transmits said information to said predetermined information recipients through facsimile.

22. The method of Claim 19, wherein said server transmits said information to said predetermined information recipients through electronic mail.

23. The method of Claim 19, wherein said server transmits said information to said predetermined information recipients through standard mail.

24. The method of Claim 19, wherein said predetermined information recipients include funeral homes, organ donor banks, next of kin, medical professionals, Medicare or other government health care organizations, and at least one insurance company.

25. A computer-implemented system for transmitting information when time is of the essence, comprising:

a scanning device for reading unique eye characteristics;  
a local device, connected to said scanning device, for receiving said unique eye characteristics from said scanning device, and for transmitting said unique eye characteristics to a central server, wherein said central server transmits said unique eye characteristics to an information database containing information matched to said unique eye characteristics and in response thereto, retrieves said information from said database and transmits said information.

26. The system of claim 25, wherein said central server transmits a first portion of said information to said local device.

27. The system of claim 25, wherein the central server also transmits a second portion of said information to at least one predetermined information recipient.

28. A computer-implemented system for conveying information to emergency medical personnel when time is of the essence, comprising:

an information database for storing unique patient eye characteristics associated with a patient identifier and patient information;  
a scanning device for recording of said unique patient eye characteristics;

a local device connected to said scanning device for receiving said unique patient eye characteristics from said scanning device and for transmitting said unique patient eye characteristics through a global communications network;

5       a central server operatively connected to said global communications network for receiving said unique patient eye characteristics from said local device, retrieving said patient information associated with said unique patient eye characteristics from said database, and transmitting said information.

10      29. The system of claim 28, wherein said central server transmits a first portion of said information said local device.

          30. The system of Claim 28, wherein said patient information includes general patient data, a patient picture, a do not resuscitate order, living wills, and medical powers of attorney.

15      31. The system of claim 28, wherein the central server also transmits a second portion of said information to at least one predetermined information recipient.

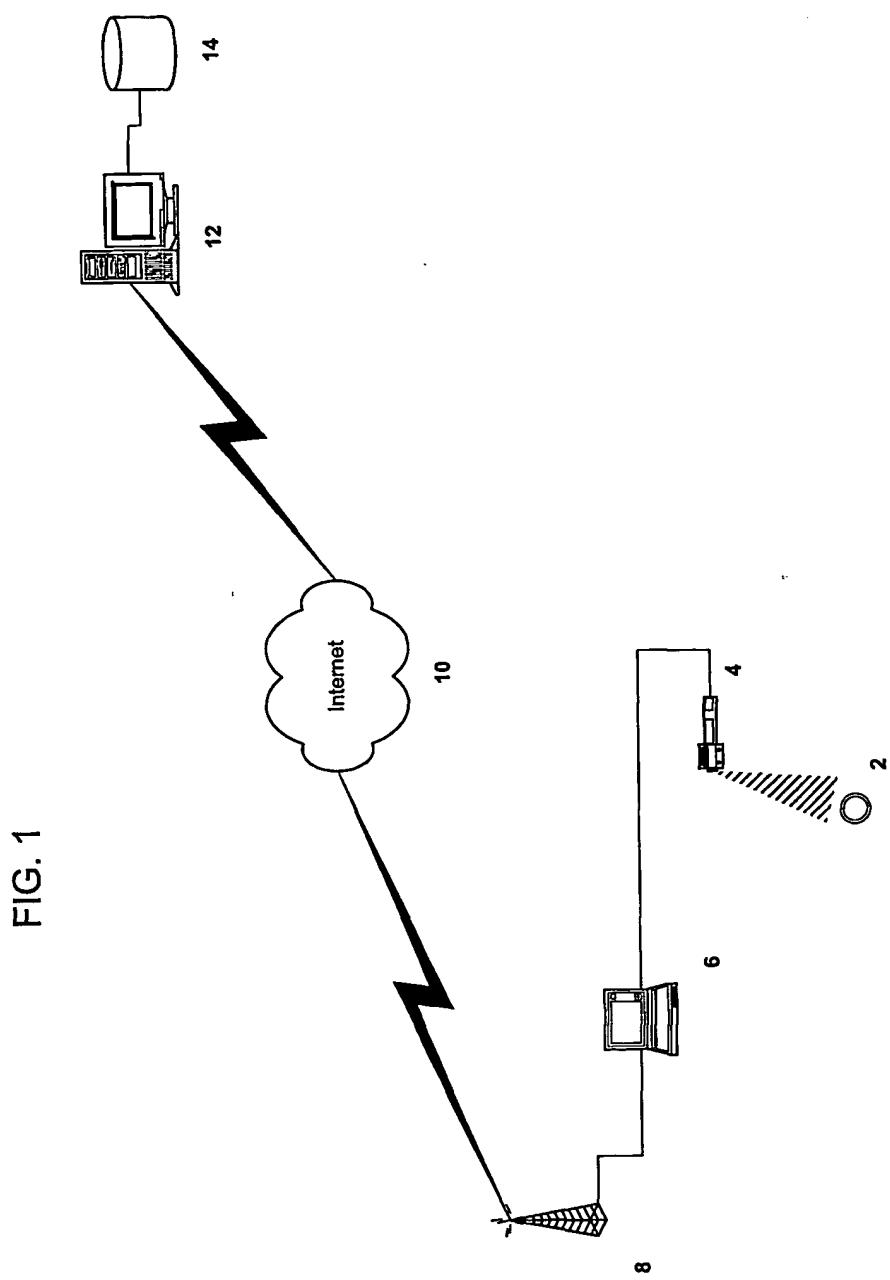
20      32. The system of Claim 31, wherein said server communicates said information to said predetermined information recipients through the telephone.

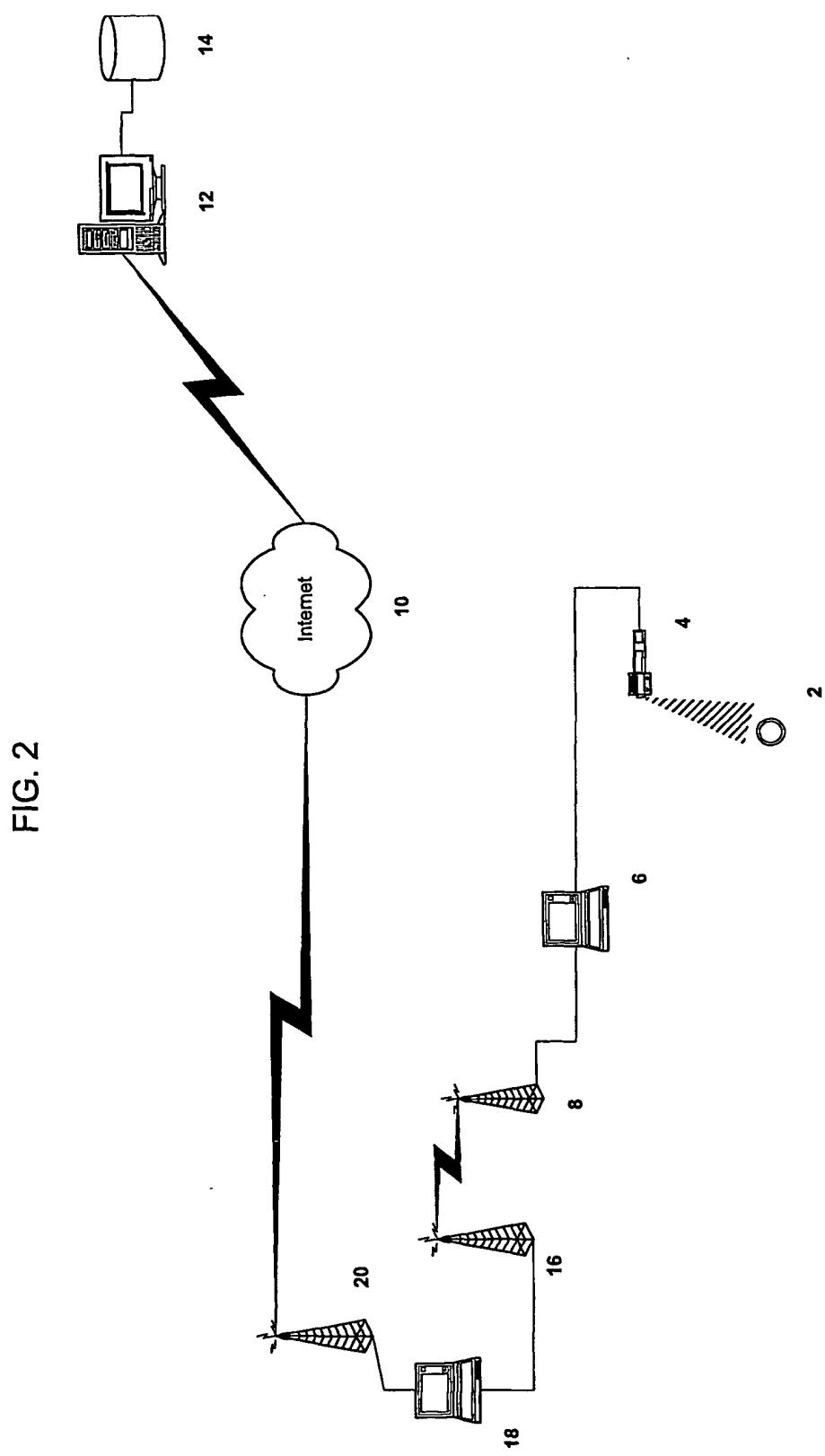
          33. The system of Claim 31, wherein said server communicates said information to said predetermined information recipients through facsimile.

25      34. The system of Claim 31, wherein said server communicates said information to said predetermined information recipients through electronic mail.

          35. The system of Claim 31, wherein said server communicates said information to said predetermined information recipients through standard mail.

30      36. The system of Claim 31, wherein said predetermined information recipients include funeral homes, organ donor banks, next of kin, medical professionals, Medicare or other government health care organizations, and at least one insurance company.





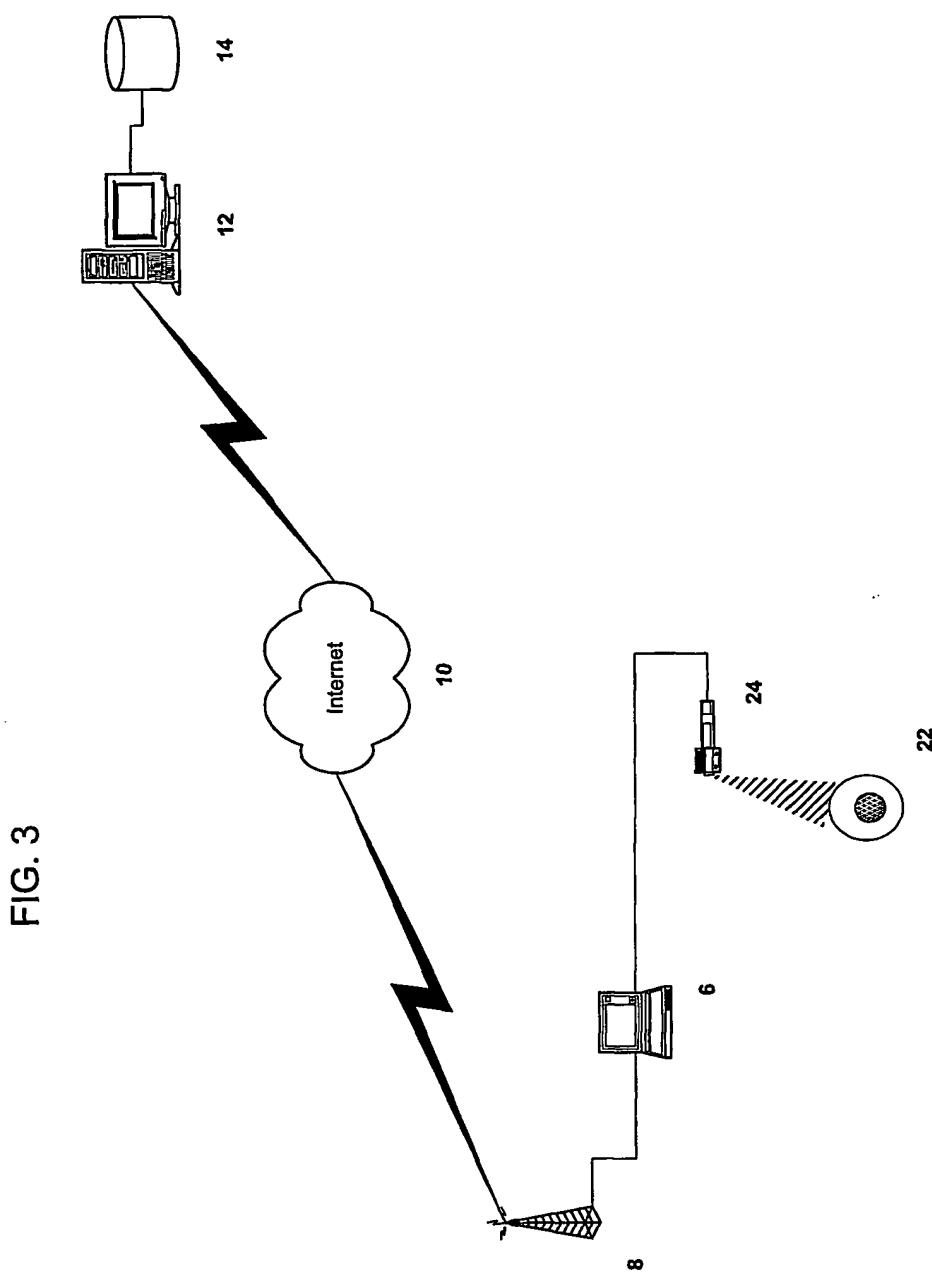
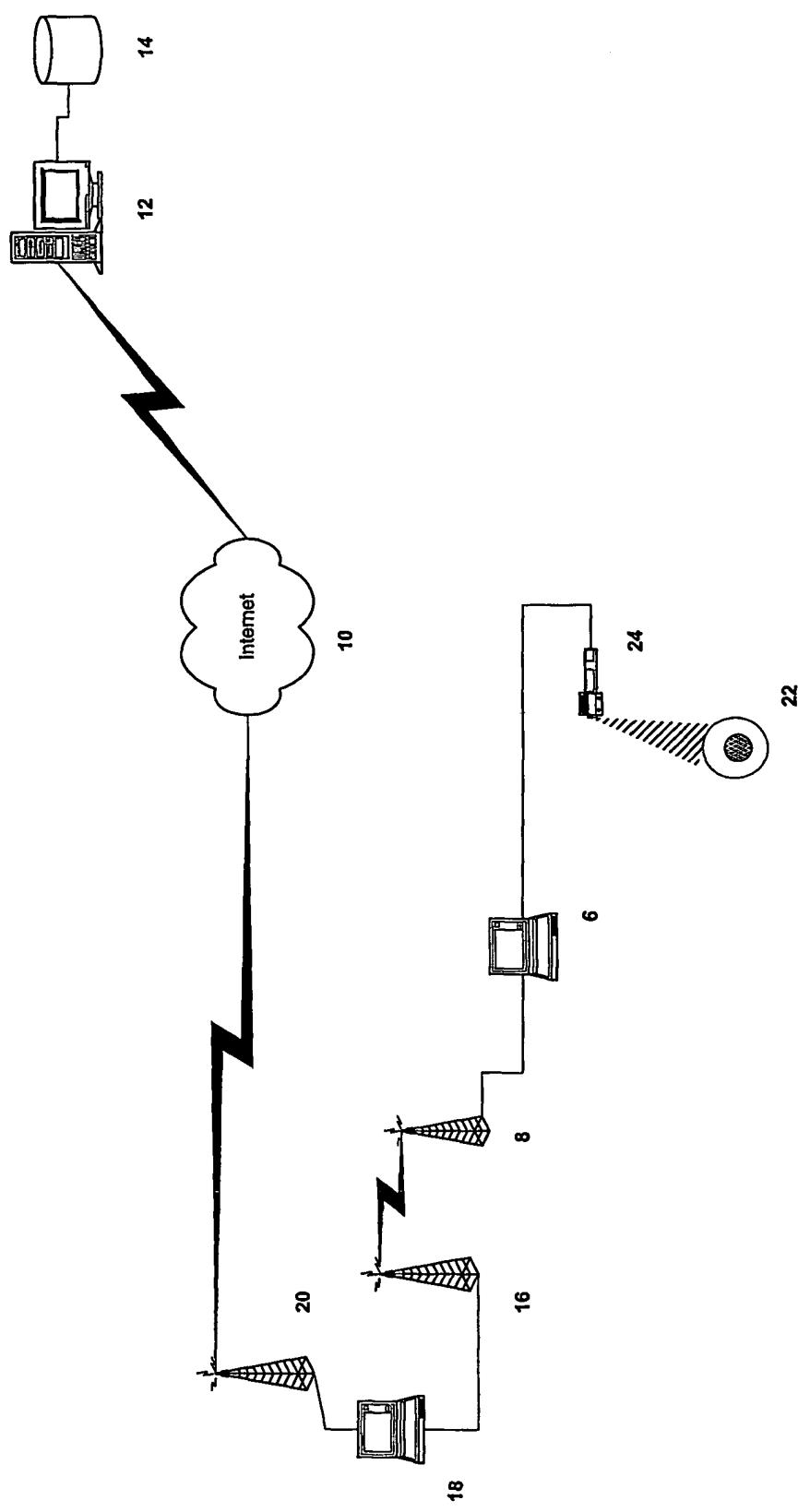
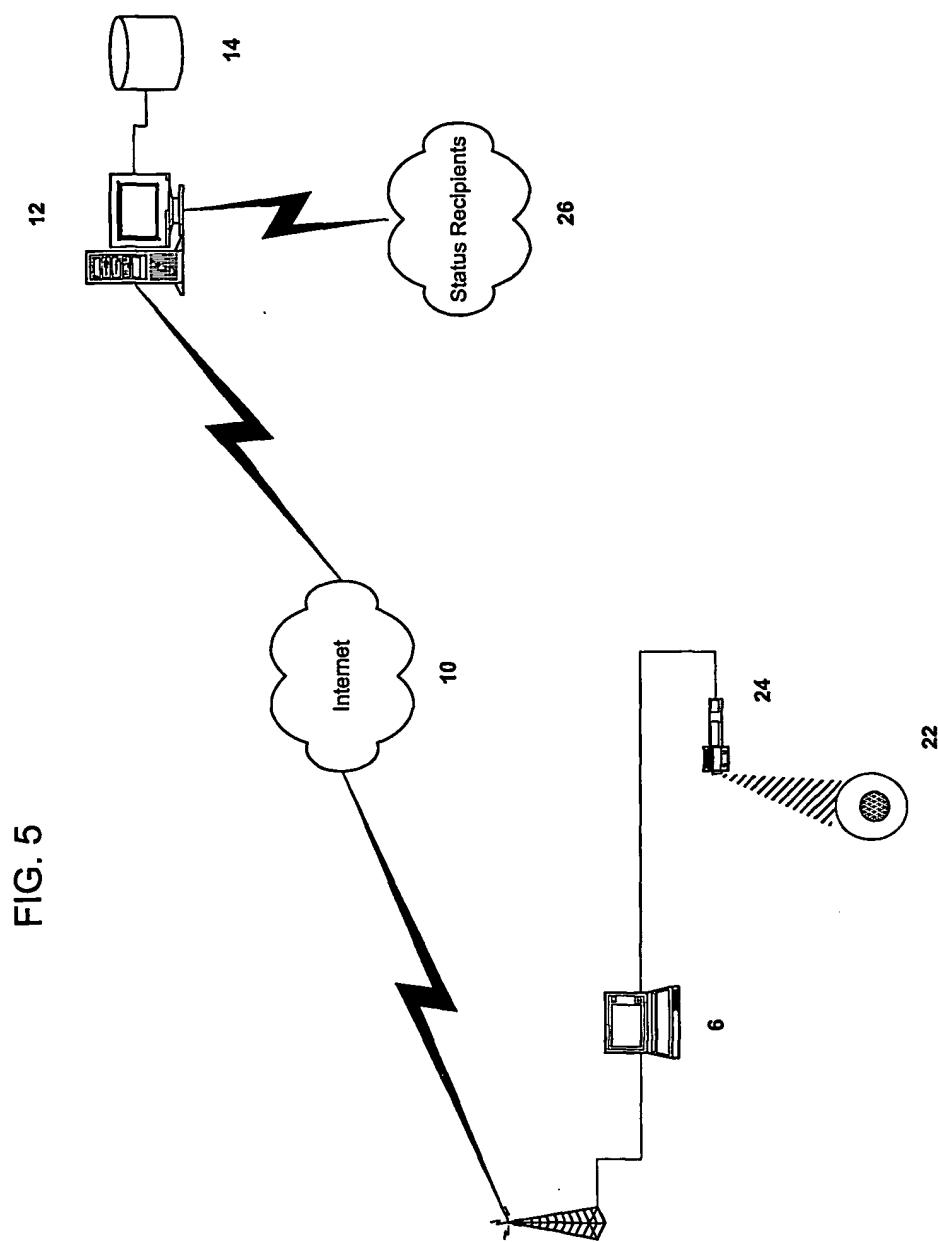


FIG. 3

FIG. 4





**FIG. 6**

```

graph TD
    A[Emergency Response Team Called] -- NO --> B[System not needed]
    A -- YES --> C{Individual dead or dying?}
    C -- NO --> D[Emergency Response Team follows normal protocols]
    C -- YES --> E[Emergency Response Team Initiates System]
    E --> F{Individual is wearing Transponder?}
    F -- NO --> D
    F -- YES --> G[Emergency Response Team Scans Transponder with Handheld Scanner]
    G --> H[Transponder Contains unique patient ID]
    H --> I[Server computer processes request by querying Information database]
    I --> J[Wireless PC card submits request (Query) to the server computer through the Internet]
    J --> K[Portable computer uses wireless PC card which is directly connected to the Internet]
    K --> L[Portable computer receives record containing patient information and displays the following information:  
1. Patient Information  
2. Picture of Patient  
3. DNR Patient Signature  
4. DNR Physician Signature  
5. Living Will Signature]
    L --> M[Database retrieves data and submits patient information to the portable computer through the server computer]
  
```

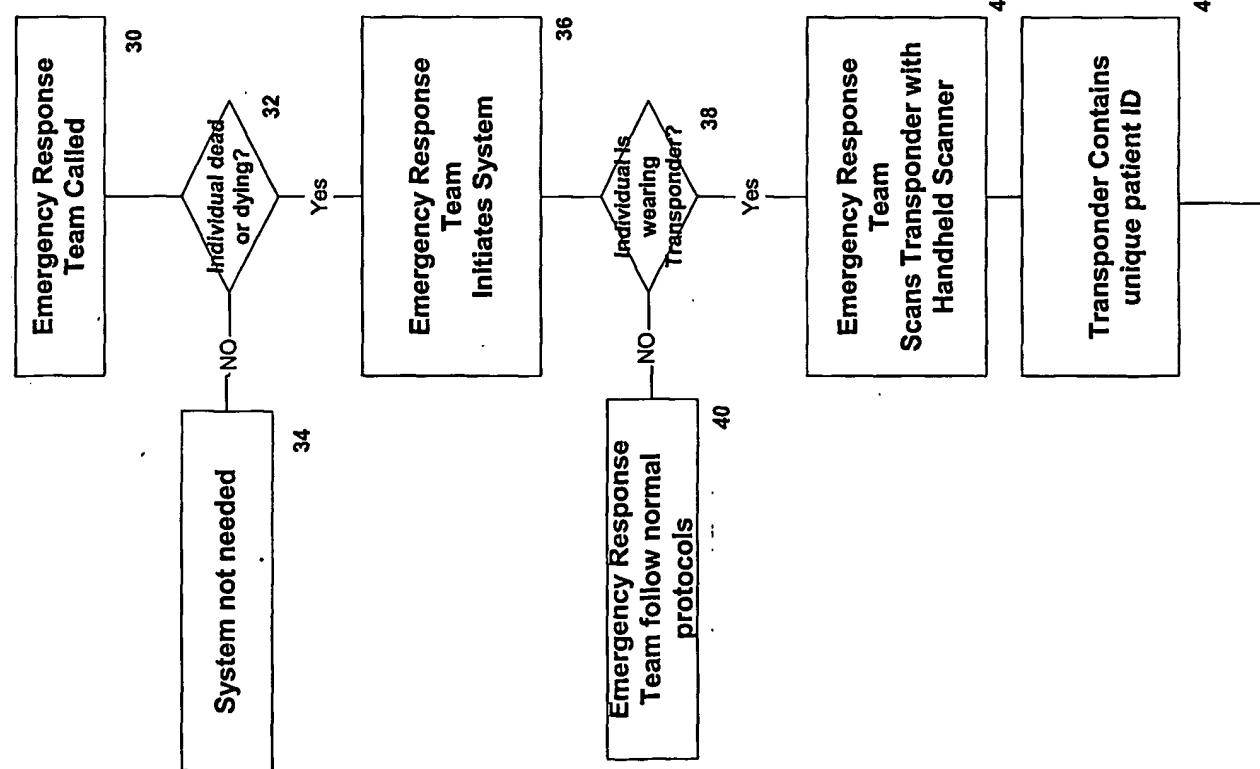


FIG. 7

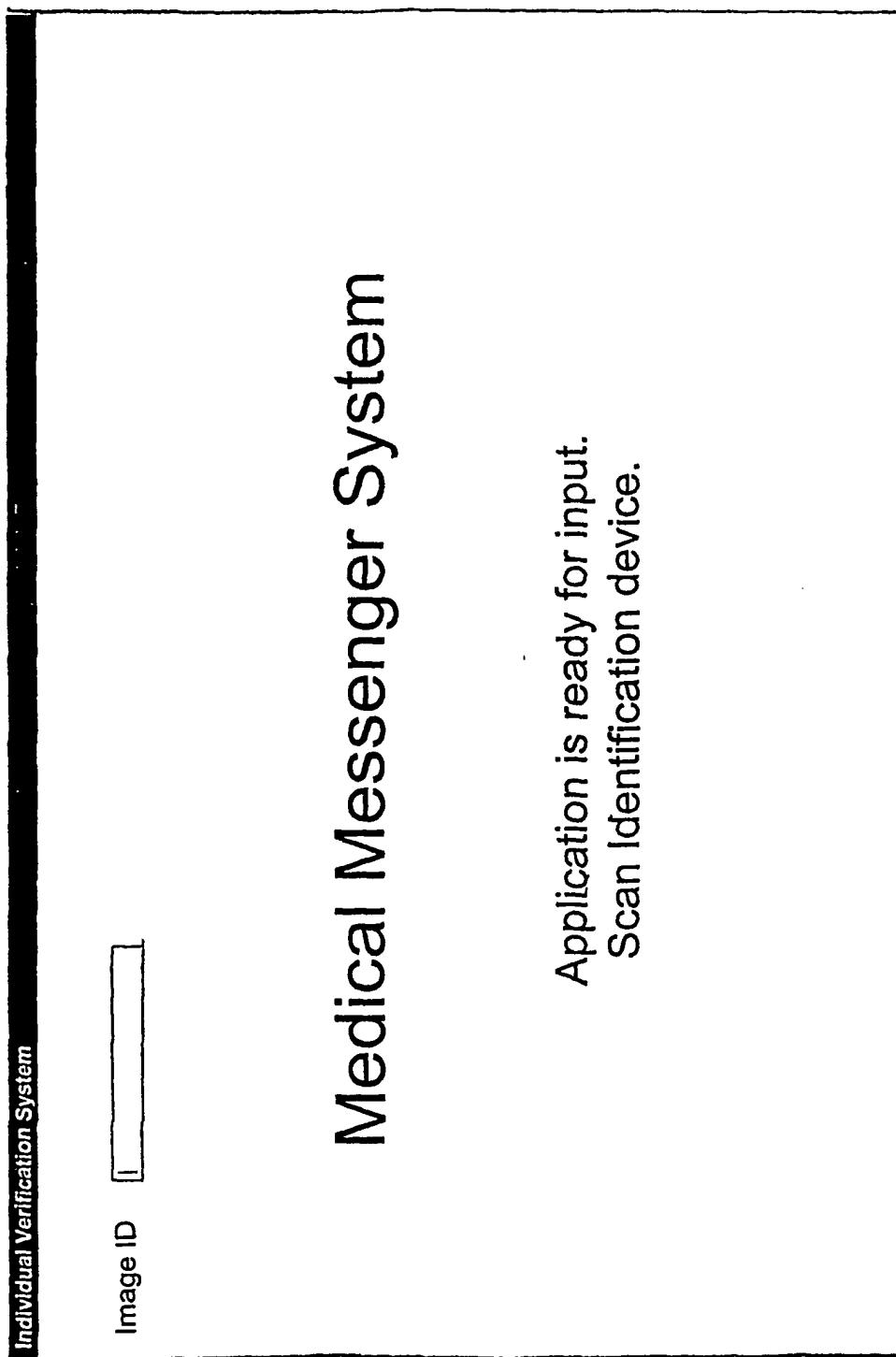


FIG. 8

Individual Verification System

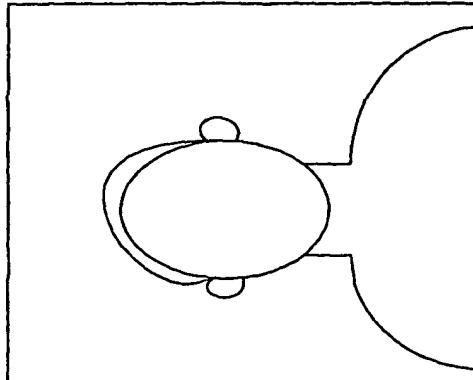
Image ID

Living Will Tab

Click Here 

Name/Address:

Joe  Doe  
 444 Elm Drive  
 Palm, Idaho 22222  
**Social Security**  
 299-00-8888



Scroll Down to see Document 

Effective Date: \_\_\_\_\_

**DO NOT RESUSCITATE**

  
Florida  
Prehospital Do Not Resuscitate Order (DNRO)

FIG. 9

<b>DO NOT RESUSCITATE</b>	
Effective Date: _____	
Florida	
Prehospital Do Not Resuscitate Order (DNR)	
(Please Print or Type)	
PATIENT'S FULL LEGAL NAME: _____	
ATTENDING PHYSICIAN'S ORDER	
<p>I, the undersigned, a physician licensed pursuant to Chapter 458 or 458, F.S., state part I am the attending physician of the patient named above. I have documented in the patient's medical record that: (print, check, 1 or 2)</p> <p><input type="checkbox"/> 1. The patient is CAPABLE of making an informed decision and consent about providing, withholding or withdrawing a specific medical treatment or course of treatment. Signature of patient is required in Box A, reverse side.</p> <p><input type="checkbox"/> 2. The patient is INCAPABLE of making an informed decision and consent about providing, withholding or withdrawing a specific medical treatment because the patient is unable to understand the nature, extent or probable consequences of the proposed medical decision, or to make a rational evaluation of the risks and benefits of treatments in that decision. I have made this determination after consultation with a second physician licensed under Chapter 458 or 458.</p>	
<p>If 2 above is checked, (patient is INCAPABLE of making an informed decision), either 1, 2, or 3 below must be checked:</p> <p><input type="checkbox"/> 1. The patient has executed a written advance directive which directs that life-sustaining procedures be withheld or withdrawn. Signature of patient or proxy or guardian is required in Box B, reverse side and a copy of the advance directive must be attached.</p> <p><input type="checkbox"/> 2. The patient has executed a written advance directive which appoints a health care surrogate pursuant to Chapter 765, F.S., to make health care decisions on behalf of the patient and provides that surrogate with authority to direct that life-sustaining procedures be withheld or withdrawn. Signature of the appointed surrogate is required in Box B, reverse side and a copy of the advance directive must be attached.</p> <p><input type="checkbox"/> 3. The patient has NOT executed a written advance directive (but still retains decisional capacity) or durable power of attorney for health care. Signature of Guardian, if one has been appointed, or proxy, pursuant to Chapter 765, Part IV, F.S., is required in Box B, reverse side.</p>	
<p>Based upon the informed directive, decision and consent on the reverse side, I hereby direct any and all emergency medical services personnel, containing on the effective date noted above, to withhold cardiopulmonary resuscitation (cardiac compression, endotracheal intubation, and other advanced airway management, artificial ventilation, defibrillation and related procedures) from the patient, the event of the patient's cardiac or respiratory arrest. I further direct such personnel to provide comfort care to the patient other medical interventions, such as intravenous fluids, oxygen or other therapies deemed necessary to provide comfort care to the illiterate patient.</p>	
Signature of Attending Physician and Date	
<p><input type="checkbox"/> Printed Name _____</p> <p><input type="checkbox"/> This DNR has been properly completed.</p>	
BOX A OR B MUST BE COMPLETED	
<p>PATIENT'S SIGNATURE</p> <p><input type="checkbox"/> Physician's Medical License Number _____</p> <p><input type="checkbox"/> Signature of Patient or Surrogate or Proxy or Guardian _____</p>	
<p>WITNESSES:</p> <p>1. <input type="checkbox"/> Witness' Signature and Date _____ _____ <input type="checkbox"/> Printed Name _____</p> <p>2. <input type="checkbox"/> Witness' Signature and Date _____ _____ <input type="checkbox"/> Printed Name _____</p>	

FIG. 10

Individual Verification System

**Living Will**

**Living Will Declaration**

Declaration made this \_\_\_\_\_ day of \_\_\_\_\_, 19\_\_\_\_\_  
I, \_\_\_\_\_, make known my desire that my dying shall not be artificially prolonged under the circumstances set forth below, and do hereby declare:

If at any time I should have a terminal condition and my attending physician has determined that there can be no recovery from such condition and my death is imminent, where the application of life-prolonging procedures would serve only to artificially prolong the dying process, I direct that such procedures be withheld or withdrawn, and that I be permitted to die naturally with only the administration of medication or the performance of any medical procedure deemed necessary to provide me with comfort, care or to alleviate pain. In addition, even if my death is not imminent, I direct that, if I have a terminal condition or am irreversibly unconscious, nutrition and hydration (food and water) not be provided by tubing or intravenously.

In the absence of my ability to give directions regarding the use of such life-prolonging procedures, it is my intention that this declaration shall be honored by my family and physician as the final expression of my legal right to refuse medical or surgical treatment and accept the consequences of such refusal.

Should I become comatose, incompetent or otherwise mentally or physically incapable of communication, I authorize \_\_\_\_\_ to make treatment decisions on my behalf in accordance with my Living Will Declaration. If my designated representative is not readily available, my directions in this Declaration should be carried out without the concurrence of the representative.

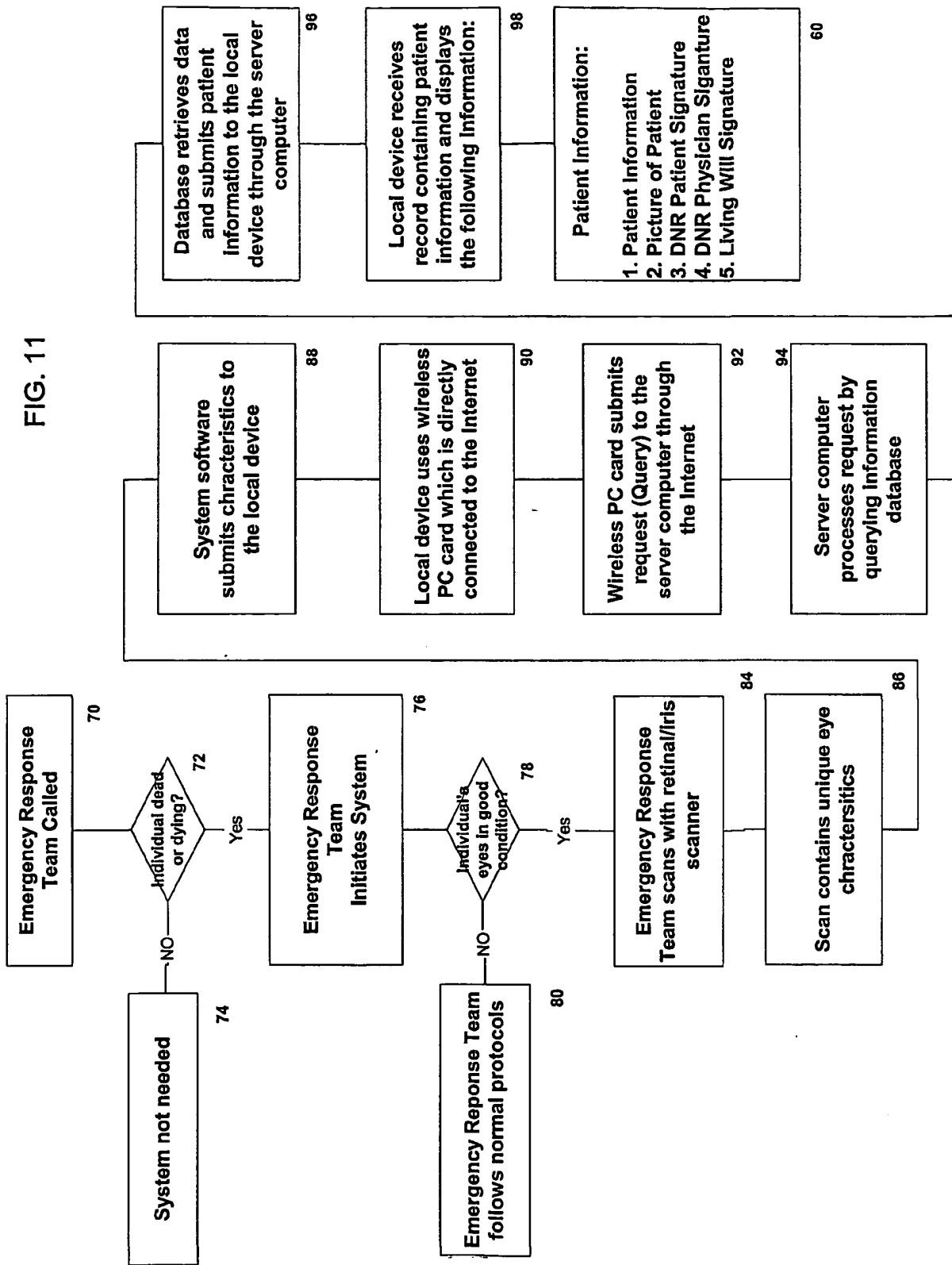
I understand the full importance of this Declaration and I am emotionally and mentally competent to make this Declaration.

The declarant is known to me and I believe him/her to be of sound mind.  
Witness \_\_\_\_\_  
Witness \_\_\_\_\_

Note: One of the witnesses should not be a spouse or blood relative of the declarant.

THIS LIVING WILL CONFORMS TO FLORIDA STATE LAW AND IS USEABLE IN MOST OTHER STATES

FIG. 11



**This Page is Inserted by IFW Indexing and Scanning  
Operations and is not part of the Official Record**

**BEST AVAILABLE IMAGES**

Defective images within this document are accurate representations of the original documents submitted by the applicant.

Defects in the images include but are not limited to the items checked:

- BLACK BORDERS**
- IMAGE CUT OFF AT TOP, BOTTOM OR SIDES**
- FADED TEXT OR DRAWING**
- BLURRED OR ILLEGIBLE TEXT OR DRAWING**
- SKEWED/SLANTED IMAGES**
- COLOR OR BLACK AND WHITE PHOTOGRAPHS**
- GRAY SCALE DOCUMENTS**
- LINES OR MARKS ON ORIGINAL DOCUMENT**
- REFERENCE(S) OR EXHIBIT(S) SUBMITTED ARE POOR QUALITY**
- OTHER:** \_\_\_\_\_

**IMAGES ARE BEST AVAILABLE COPY.**

**As rescanning these documents will not correct the image problems checked, please do not report these problems to the IFW Image Problem Mailbox.**